

REMARKS

Claims 1 and 5-7 have been amended. Support for the amendment to claims 1 and 5 can be found in Example 1 and Fig. 2. Support for the amendment to claims 6 and 7 can be found on page 14, second full paragraph and page 16, fourth paragraph. Thus, no new matter has been added. Upon entry of this amendment, which is respectfully requested, claims 1, 2 and 5-7 will be pending.

Furthermore, entry of the amendment at this stage of prosecution is respectfully requested as placing the case in condition for allowance.

Claim Rejections Under § 112

Claims 6 and 7 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner considered that the recitation "the electrolytic cell has a space of from 1 mm to 50 mm between the gas cathode and the membrane" in claims 6 and 7 is not described in the specification.

Applicants respond as follows.

Applicants disclose that the distance between the electrode is 1 mm to 50 mm. See page 14, second full paragraph and page 16, fourth paragraph. Thus, claims 6 and 7 have been amended, as described in the specification, to recite that the electrolytic cell has a space of from 1 mm to 50 mm between the gas cathode and the ~~membrane~~ anode.

It is respectfully submitted that the claims as amended fully comply with 35 U.S.C. § 112, first paragraph, and withdrawal of the foregoing rejection is respectfully requested.

Claim Rejection Under § 103

Claims 1, 2 and 5-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,387,238 to Merk et al. in view of U.S. Patent No. 6,949,178 to Tennakoon et al.

Applicants respectfully traverse for the following reasons.

The present claims recite an electrolytic cell comprising an anode chamber including an anode (41), a cathode chamber including a gas cathode (42), a catholyte inlet (46) and a catholyte outlet and a membrane (43) separating the anode and cathode chambers. In addition, a particulate solid acid catalyst comprising a polymer resin fills the space between the gas cathode and the membrane. The cathode (42) is formed by kneading a graphite powder with a PTFE resin as a catalyst, spreading the mixture over a carbon cloth as a core material, and then calcining it. *See*, Example 1 of the present specification.

Merk discloses a cell structure comprising a cell having a membrane which separates the unit into an anode chamber and a cathode chamber, wherein the cathode is in contact with an electrolyte. *See*, Claims 4 and 7 of Merk et al. Merk fails to disclose or suggest the use of a particulate solid acid catalyst packed in the cathode chamber.

Tennakoon discloses a gas diffusion cathode (130) comprising a gas diffusion layer (134) of carbon cloth or carbon paper fiber that is impregnated with a sintered mass derived from carbon powder, a perfluorinated sulfonic acid polymer, and polytetrafluoroethylene (PTFE) emulsion (132). Tennakoon further discloses that the gas diffusion cathode preferably comprises a polytetrafluoroethylene-bonded, semi-hydrophobic catalyst layer (132) supported on a hydrophobic gas diffusion layer (134). *See*, col. 7, lines 20-29. Tennakoon fails to disclose or

suggest a particulate solid acid catalyst filling a space between the gas cathode and the membrane, as required by the present claims.

Thus, there is no combination of Merk and Tennakoon which would achieve the invention of amended claims 1 and 5, and withdrawal of the foregoing rejection under 35 U.S.C. § 103(a) is respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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